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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/657,627	Applicant(s) LEE ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3-14-06 has been entered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As indicated in **MPEP 2173.05(p) II**:

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

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Claim 4 requires both apparatus and method steps, namely the rotation of the bracket is the method step. Since the claim is directed to neither a process nor a machine, applicant cannot obtain a patent therefore.

Claim 1 requires that the two rollers are "moving". Movement is a method step, not structure.

The corresponding 112 rejection is made below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. 102(b) or (e) as being anticipated by Yoshida WO 00/44680 or US 6519404.

The US Patent is deemed to be a translation of the WO document and thus the US patent will be relied on to show what the WO document discloses.

Looking to the Yoshida drawings: 12 is the heating furnace; 22, 25 are fixing rollers; Col. 1, lines 40-45 discloses the fiber standard value controller unit; 4, 5 and/or 23 are the moving rollers (col. 6, lines 33-41); and 27 is the winding reel. See also the Office action of 6/28/2005 for more details.

As to the curvature radius and adjustment, it is deemed that such is inherently met. Alternatively, it is an intended use limitation – which Yoshida is capable of achieving.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). It is noted that even with Applicant's invention, if one were to apply a higher tension to the fiber as shown in figure 5, the fiber would not droop in the interval between rollers 18 and 19. Similarly, if one were to use lower tension in the Yoshida invention, the Yoshida fiber would droop and take a radius. The rollers are on the same side (the under side) of the fiber.

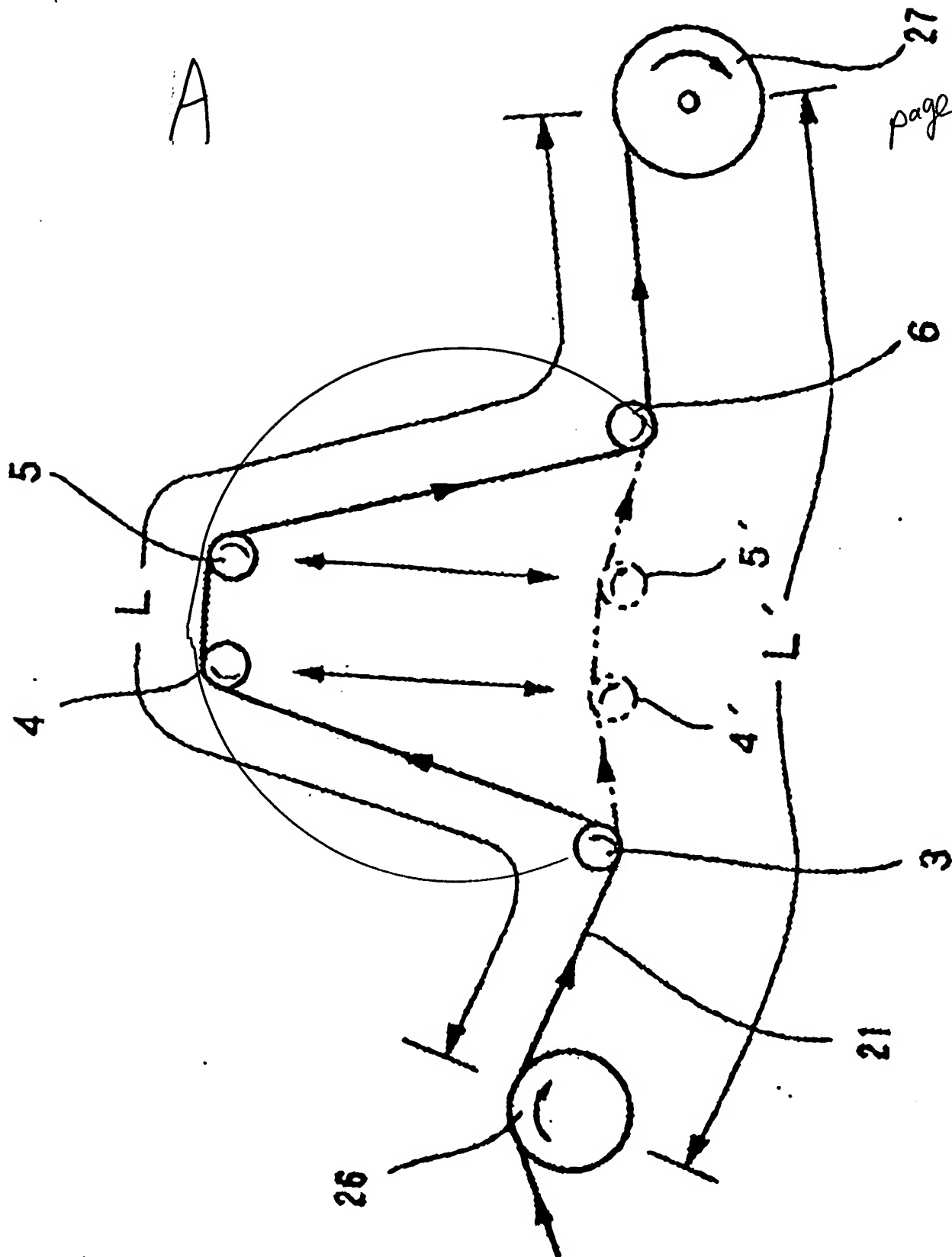
As to the inherent adjustability of the radius: it is noted that the specification does not indicate or suggest how one must/may determine what the curvature radius is of the fiber when the fiber does not follow a true circle. It is clear from Applicant's drawing that Applicant does not intend the claims to exclude non-true circles. It is deemed that the broadest reasonable interpretation of the term "curvature radius" encompasses a radius of a circumscribed circle (see attached figure A), it would also encompass a radius of an inscribed circle (see attached figure B symmetrical path). Examiner could find no reason to interpret the claims as excluding the paths of Yoshida from reading on the present claims. It is clear that Yoshida's invention would meet the limitations relating to the radius – based on this interpretation. In other words: Yoshida is very similar to Applicant's disclose embodiment and examiner can find no basis for concluding that Yoshida's adjustment would not read on the present claims. Any difference would be based on some definition/meaning of the radius: a definition/meaning that Examiner cannot locate.

As to the two "immediately following" limitations – it is deemed that based on Applicant's figure 5 that "immediately following" connotes within the same apparatus – as oppose to reeling the fiber on a spool. Then transporting the spool to another coating apparatus which has the rollers. Specifically see how applicant's fixing roller 17 and the controller unit have intervening structure there between.

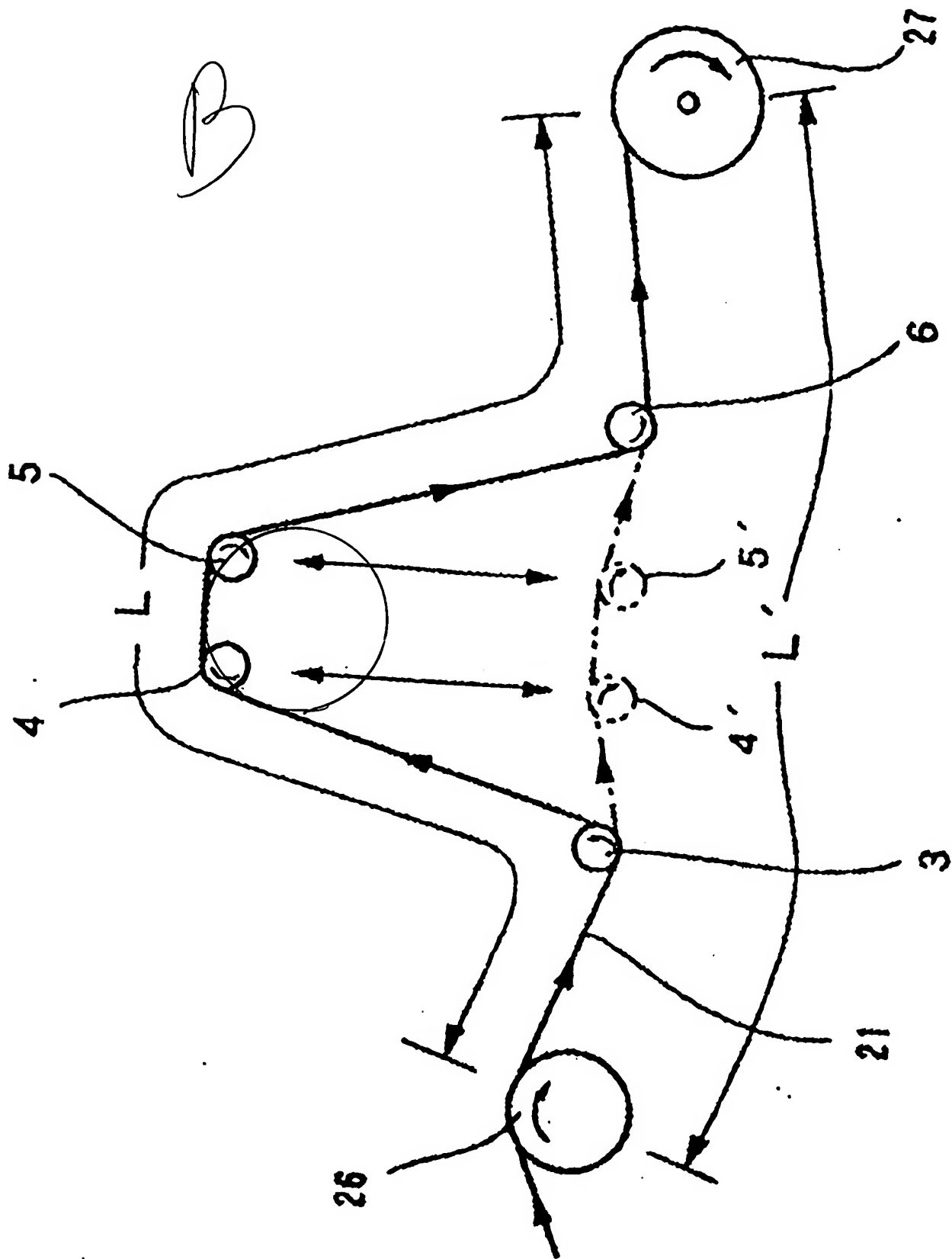
As to the release bending stress – it is clear that the bending stress changes to zero after it passes around a roller. In other words, there is a bending stress when the

A

page 5A



B



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fiber is bent, and there is no bending stress when the fiber is not bent. The same applies to the concentration.

The rest of the limitations are readily apparent.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida 6519404 as applied to claim 1 above, and further in view of Askins H1268.

Yoshida does not disclose how the rollers are moved or connected. Askins shows it is known to connect plural rollers to a bracket 62 and that such provides adjustability to the rollers; Askins also seems to suggest that such is a simple means for providing adjustment (see col. 5, line 49 to col. 6, line 22 and figures 4-6). It would have been obvious to use a bracket to connect the Yoshida rollers, so that they would not move during the process. It is noted that Yoshida shows that both of the rollers are equidistant apart from each other during their movement. It would have been obvious to connect both of the rollers to the same bracket so as to reduce the number of actuating mechanisms. In other words, there would be no point to have two roller movers move each roller, when one mover could move both of the rollers simultaneously. Thus the rollers would be connected to the same structure.

Claim 3 requires that the bracket have a "vertical direction guide". It is noted that the term is not defined. There is no indication whether it means it serves to guide in the "vertical direction", or whether it is a "direction guide" that is vertically oriented. Since neither is specified, it is deemed that the claim reads on both interpretations. Inasmuch as the Yoshida requires the rollers move in the vertical direction, it would have been obvious to have some sort of structure on or with the bracket that permits it to be

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guided up wards. In as much as applicant considers the hole 21 to be a guide, it is deemed that any structure or lack thereof (i.e. hole) would compromise the claimed guide. In other words: the bracket needs something (e.g. hole, a pin, edge surfaces, a gripping surface, etc.) to permit it to be moved upwards). Whatever structure one would use would inherently read on the claim guide.

III. AUTOMATING A MANUAL ACTIVITY

In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

As to the "formed by a groove". It is noted that a groove is essentially nothingness. Moreover, the present specification does even mention the term "groove" that would suggest how a groove is used in the forming. The limitation is deemed to be a product-by-process type limitation: the limitation merely requires how one forms the guide. But the formation of the guide is not very relevant because the invention is directed to the apparatus. By looking at the Yoshida/Askins apparatus, it would be impossible to conclude that a groove was NOT used in the formation of the apparatus.

As to the rollers being embedded- it is clear that the rollers are as embedded/integral as one can have rollers and still have them roll.

Claim 4: As shown in figure 5 of Askins, there is a pivot joint near or at 74. It is deemed it is "in one side of the bracket" in as much as applicant's invention has such. It would have been obvious to have such a pivot in the Yoshida invention so as to permit

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adjustability. As pointed at col. 5, line 43 of Askins, a mere 0.007 misalignment causes significant problems.

From MPEP 2144.04

D. Making Adjustable

In re Stevens , 212 F.2d 197, 101 USPQ 284 (CCPA 1954) (Claims were directed to a handle for a fishing rod wherein the handle has a longitudinally adjustable finger hook, and the hand grip of the handle connects with the body portion by means of a universal joint. The court held that adjustability, where needed, is not a patentable advance, and because there was an art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious.).

One would have been motivated to provide such a pivoting arrangement so as to permit fine tuning as needed.

Likewise for claim 5: it would have been obvious to provide the ability to adjust the position of the rollers in the direction claimed. Clearly, if one could not adjust the rollers, one would have to throw out the entire apparatus if the alignment is not correct. Providing non-specific adjustment is generally not a patentable invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

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skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the fixing roller being immediately following the controller unit. Examiner could find no literal support for the limitation and the drawings show that there is structure between the features.

Examiner could find no support for the newly claimed limitations that relate to adjusting the curvature "by an adjusted curvature radius" (claim 1, line 8), and changing a drawing direction "by a curvature radius" (line 12). First of all Examiner could not find explicit or implicit support for this. Second, as argued on page 6 of the Feb 20, 2006 responses: the curvature is adjusted "to" the adjusted curvature radius. Adjusting "to" something does not provide support for adjusting "by something".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As pointed out above, the claims require adjustments being "by" a radius. But Applicant and the specification indicate that the adjustments are "to" the radius. It is unclear if there is any difference by the use of the term "by" rather than "to".

The terms "adjusted curvature radius" and "curvature radius". First it is noted that these terms are not defined in the specification. Second the plain meaning of "radius" is substantially along the lines of "a line segment extending from the center of a circle to the circumference." But what is shown in figure 3 is not a circle. Whereas the it is somewhat like a circle, there is no indication as to how one determines what the radius R_2 is. Moreover, the existence of the curving/festooning is merely a matter of intended use. If one were to apply more tension to the fiber, there would be no curvature between the rollers.

Still further, it is noted in the drawings that where the fiber meets the rollers, the fiber takes the curvature of the roller. And thus the fiber will undergo the same stress. Note the equation of page 4, line 8 – the equation makes no mention of the length of the bend. For example, roller 17 of figure 5 shows that the fiber is bent around 17 – perhaps about 30 degrees. Based on applicant's equation, the stress would be the same as if it were bent 90 degrees.

Claim 2: it is unclear what the "respectively" refers back to; it is unclear if it means that each roller is connected to its own bracket, or if all the rollers are connected to the bracket, or what. Page 9, lines 15-17 indicate that both rollers are on the bracket, but figure 4A indicates that only one roller is on the bracket.

Claims 1 and 4: as indicated above, require method steps and apparatus steps – and it is indefinite because it is unclear how an apparatus can have a method step.

Claim 4 requires that bracket has a joint "in one side". But as shown in the drawings, 22 is at the bottom, not a side. It is unclear if one can consider a bottom to be

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a side – or if it means a front side. Furthermore, feature 22 does not appear to be “in” the side – it seems to be “on” or “at” a side.

Claim 5, line 5 there is confusing antecedent basis for “bracket”. It is unclear if it is an additional bracket or if it is the bracket of claim 2.

Claim 6: there is no antecedent basis for “said spin apparatus adapted to impress a spin”. It is unclear if it is reasonable to assume that the spin apparatus of claim 5 is an adapted apparatus.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “drawing surface” (claim 1 and elsewhere) the groove and the embedded rollers (both claim 3), must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the bracket 10 connected with the moving rollers 18 and 19 as described in the specification (page 9, lines 15-17). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The groove (claim 3) and the embedded rollers (claim 3) are not described in the specification.

Response to Arguments

Applicant's arguments filed 20 Feb 2006 have been fully considered but they are not persuasive.

It is argued that Yoshida does not have adjusting the radius by moving rollers so as to not sharply change the optical fiber direction. This is not persuasive because 1) the claim does not preclude sharp changes. 2) There is no indication as to how sharp "sharp" is. 3) Changing position is an intended use – not structure. 4) Yoshida's invention has adjustability very similar to applicants – there is no reason to believe that applicant's invention can reduce sharpness as much as Yoshida's invention. 5) Examiner disagrees with the assumption that the Yoshida's bends are any worse than applicants as follows:

As shown in page 4, line 8 of the instant specification, the stress is based on E, y and R. The amount of bending is immaterial. Applicant's rollers 17, 18 and 19 have

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the fiber following the roller for about 10-30 degrees or so. Yoshida's rollers 4 and 5 bend the fiber around 80 degrees or so at their upper end. Based on the equations, the stresses are identical (assuming R is identical). To look at another way, A fiber wound 100 time around a spool would have the same stress as a fiber wound 10 times around the spool, or 1 time, or $1/10^{\text{th}}$ of the way.

It is argued that the present apparatus is capable of minimizing the breakage. This is not very relevant because the claims do not require this, and because it is a intended use. Moreover, the figures show that the fiber is bent, and thus there would be some stress. It would seem that the only way to minimize breaking (to near zero) is to have no bending at all.

It is also argued that Yoshida's rollers are on opposite side of the fiber from that of fixing roller 3. This is largely irrelevant. 22 and/or 25 can be considered to be the fixing roller. The claims are comprising in nature and thus are open to additional rollers. Moreover, the placement of the fiber is an intended use.

The arguments regarding figure 3 of Yoshida are not very relevant because figure 3 is directed to the prior art – see its discussion in col. 1 of Yoshida.

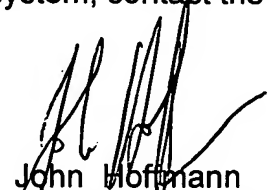
It is further argued that Yoshida does not have fixing roller immediately following the optical fiber standard value controller unit. As pointed out above, Yoshida's fixing roller is as "immediately following" as applicant's invention roller is.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

4-27-06

jmh